

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte GREGORY A. ZURBUCHEN

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Appeal No. 1997-2248  
Application No. 08/378,513

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ON BRIEF

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Before ABRAMS, FRANKFORT and McQUADE, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Gregory A. Zurbuchen originally took this appeal from the final rejection of claims 9 through 20. The appellant has since canceled claims 13 and 19 and amended claims 9 and 14. Thus, the appeal now involves claims 9 through 12, 14 through 18 and 20, all of the claims currently pending in the

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application.

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The invention relates to a method of making a composite hand tool. Claim 9 is illustrative and reads as follows:

9. A method of making a composite hand tool structure comprising the steps of: providing a gear insert having an axis and an outer side surface with a plurality of recesses formed therein, positioning the gear insert in a mold cavity in a compression molding apparatus, preparing a plurality of layers of a glass-fiber-reinforced plastic material having the shape of the outline of the hand tool, stacking the layers together to provide a mold charge, positioning the mold charge in the mold cavity around the insert, subjecting the mold charge to heat and pressure in the compression molding apparatus for a predetermined interval of time to form a composite hand tool structure with the insert molded therein with the mold charge filling the recesses, and mounting a ratchet mechanism in the insert after formation of the composite hand tool structure.

The references relied upon by the examiner as evidence of obviousness are:

Kipp 1986	4,598,614	Jul. 8,
Cooper	4,986,147	Jan. 22,
1991 Flonc et al. (Flonc)	5,080,851	Jan.
14, 1992		
Bonnes et al. (Bonnes)	5,211,669	May
18, 1993		
Pearson, British Patent Document	1,251,419	Oct. 27,
1971		
Lucas, British Patent Document	2,018,179	Oct. 17,
1979		

Claims 9 through 12, 14 through 18 and 20 stand rejected under 35 U.S.C. § 103 as follows:

a) claims 9 through 12 as being unpatentable over Bonnes

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in view of Kipp;

b) claims 14 through 18 as being unpatentable over Bonnes  
in view of Cooper and Flonc;

c) claims 9 through 12 and 14 through 18 as being  
unpatentable over Lucas; and

d) claim 20 as being unpatentable over Pearson in view of  
Lucas.

Reference is made to the appellant's main and reply  
briefs (Paper Nos. 14 and 16) and to the examiner's answer  
(Paper No. 15) for the respective positions of the appellant  
and the examiner with regard to the merits of these  
rejections.<sup>1</sup>

Bonnes, the primary reference in the first two  
rejections, discloses a composite handle for

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<sup>1</sup> Although the examiner mentioned Cooper in the  
explanation of the first rejection (see page 5 in the answer),  
she did not include Cooper in the statement of the rejection.  
Where a reference is relied on to support a rejection, whether  
or not in a minor capacity, there is no excuse for not  
positively including the reference in the statement of the  
rejection. See In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ  
406, 407 n.3 (CCPA 1970). Accordingly, we have not considered  
the teachings of Cooper in reviewing the merits of the first  
rejection.

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gardening/hardware tools such as shovels, rakes, hoes, spades and forks. The handle 10 consists of a core member 12, preferably made of wood and having a varying cross-sectional outer dimension, and an outer shell 14 composed

of a fiber-reinforced polyester resin coating and a  
resin-impregnated polyester fabric. As described by Bonnes,  
in a

preferred method for making the handle

a wood core section is produced by traditional methods  
. . . . The layers of the outer shell are prepared by  
producing a sheet molding compound ("SMC"). Such an SMC  
is produced by drawing glass fibers 42 through resin bath  
44 onto a flat mesh belt 46. . . . The resultant  
material

is passed through calender rolls 50 which press it into  
flat sheet 52. . . .

An outer veil layer is prepared using polyester  
fabric impregnated with resin . . . . When ready  
for use, the sheets 52 are rolled flat and patterns  
58, which will conform to core 12, are cut from the  
sheet, as shown in FIG. 6. Patterns 58 are then  
wrapped around the wood core beginning with an SMC  
layer. As preferably embodied herein, two or three  
SMC layers are wrapped around the wood core. Next,  
the outer veil layer is wrapped around the wood  
core. All of the layers are gathered and  
precompressed about the core.

The wrapped wood core is placed in a compression  
molding apparatus, as known in the art, and  
subject to compression molding which, as embodied  
herein, occurs  
under 400 tons of hydraulic pressure and at a curing  
temperature of 250E-300E F. generated using steam  
heat. Under these conditions, the resin reflows uniformly  
throughout the various layers and then cures.  
Furthermore, resin penetrates the outer surface of the wood  
and bonds outer shell 14 to the wood core 12 [column 5,  
line 58, through column 6, line 31].

Notwithstanding the examiner's rather generous assessment

that Bonnes teaches the basic claimed process (see pages 4 through 7 in the answer), Bonnes fails to respond to the various limitations in independent claims 9 and 14 pertaining to the provision and positioning of a "gear insert" (claims 9 and 14), the provision or preparation of fiber-reinforced plastic material layers having "the shape of the outline of the hand tool" (claims 9 and 14) and aligned "openings" (claim 14), and the mounting of a "ratchet mechanism" in the insert (claims 9 and 14). The examiner's reliance on Kipp, Cooper and Flonc to overcome these deficiencies in Bonnes is not well founded.

Kipp discloses a hand lever 1 for use with a fastening element 2 associated with a spindle, axle or the like. The hand lever is made of a low hardness synthetic material and has a metallic coupling element 11 embedded therein. The coupling element has projections 13 for anchoring it to the synthetic material and a toothed or geared inner rim 14 for engagement with complementary teeth on the fastening element.

Cooper discloses a ratchet wrench 20 comprising an integrally-formed body 24 of fiber-reinforced molded plastic,

a

ratchet drive assembly 40 disposed within an opening 38 in the head portion 28 of the body, and a metal reinforcing bar 64 embedded in the handle portion 34 of the body.

Flonc discloses a method of stabilizing complex composite preforms 3 composed of stacked layers 1 of fiber-reinforced resin wherein an uncatalyzed thermosetting resin 4 is used to temporarily bond the layers together in rigid assembly. The rigid assembly is then disposed in a mold cavity, injected with a catalyzed thermosetting resin 11 and heated to a curing temperature.

As is evident from the foregoing, Bonnes, Kipp, Cooper and Flonc pertain to diverse items and methods. Given the disparate nature of these references, it is apparent that the examiner has engaged in an impermissible hindsight reconstruction of the inventions recited in claims 9 and 14 by using these claims as blueprints to selectively piece together isolated disclosures in the prior art. The hindsight nature of the proposed reference combinations is clearly reflected by the fundamental changes that would have to be made to the Bonnes method to arrive at the claimed invention.

Therefore, we shall not sustain the standing 35 U.S.C. § 103 rejection of claim 9, and of claims 10 through 12 which depend therefrom, as being unpatentable over Bonnes in view of Kipp or the standing 35 U.S.C. § 103 rejection of claim 14, and of claims 15 through 18 which depend therefrom, as being unpatentable over Bonnes in view of Cooper and Flonc.

Lucas, the sole reference in the third rejection before us, discloses a spanner comprising an integrally formed jaw and handle made of fiber-reinforced resin and a wear-resistant liner bonded to the gripping surface of the jaw. As to the method of forming the spanner, Lucas explains that

[a] spanner of the invention may be built up, layer by layer of reinforcing fibres in resin, in a mould of the appropriate size and shape. The layers may be formed successively *in situ* in the mould or separately as sheets pre-impregnated with partly-cured resin ('prepreg sheets') which are subsequently stacked in the mould in the desired sequence. After lay-up in the mould, the mould may be closed and the resin cured using heat and pressure in the conventional manner [page 1, lines 120 through 129].

As was the case above with Bonnes, Lucas fails to respond to the various limitations in independent claims 9 and 14

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pertaining to the provision and positioning of a "gear insert" and the mounting of a "ratchet mechanism" in the insert.

Rejections based on 35 U.S.C. § 103 must rest on a factual basis. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967). In making such a rejection, the examiner has the initial duty of supplying the requisite factual basis and may not, because of doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis.

Id. Here, the examiner (see page 7 in the answer) has failed to supply any factual basis to support a conclusion that the above noted differences between the subject matter recited in claims 9 and 14 and Lucas are such

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that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103 rejection of claims 9 and 14, and of claims 10 through 12 and 15 through 18 which depend therefrom, as being unpatentable over Lucas.

Pearson, the primary reference in the last of the examiner's rejections, discloses "a ring spanner made wholly of fibre-reinforced plastics, e.g. nylon or polycarbonate, with the exception of a ring head reinforcing metal ring, preferably of paramagnetic material, keyed into the fibre-reinforced plastics" (page 1, lines 35 through 40).

Pearson does not respond to the limitations in claim 20 pertaining to the positioning of a gear insert in a mold cavity. Inasmuch as Lucas does not cure this shortcoming, the examiner's conclusion (see pages 7 and 8 in the answer) that the combined teachings of these references would have suggested the subject matter recited in claim 20 must fall.

Hence, we shall not sustain the standing 35 U.S.C. § 103 rejection of claim 20 as being unpatentable over Pearson

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in view of Lucas.

In summary and for the above reasons, the decision of the examiner to reject claims 9 through 12, 14 through 18 and 20 is reversed.

REVERSED

	)	
NEAL E. ABRAMS	)	)
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
CHARLES E. FRANKFORT	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
JOHN P. McQUADE	)	
Administrative Patent Judge	)	

JPM:hh

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